



SRC (Human), Active

Full-length recombinant protein expressed in E. coli cells

Cat# CY-SPS19-H

Lot No. P214-2
5 µg 0.1 µg/µl

Background:

SRC family belongs to non-receptor tyrosine kinases. SRC was originally identified as a transforming protein of the Rous sarcoma virus (RSV) that had enzymatic ability to phosphorylate tyrosine in protein substrates (1). SRC is overexpressed and activated in a large number of human malignancies and has been linked to the development of cancer and progression to distant metastases (2). In addition to increasing cell proliferation, a key role of SRC in cancer seems to be the ability to promote invasion and motility, functions that might contribute to tumour progression.

Product Description:

Recombinant full-length human SRC was expressed in E.coli cells using an N-terminal GST tag. The gene accession number is NM_005417.

Gene Aliases:

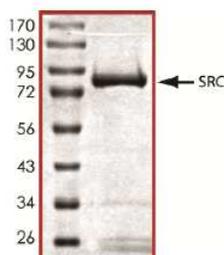
ASV; SRC1; c-SRC; p60-Src

Formulation:

Recombinant protein stored in 50mM Tris-HCl, pH 7.5, 150mM NaCl, 0.25mM DTT, 0.1mM EGTA, 0.1mM EDTA, 0.1mM PMSF, 25% glycerol.

Purity & Molecular Weight:

The purity was determined to be >95% by densitometry. Approx. MW 83kDa.



Storage:

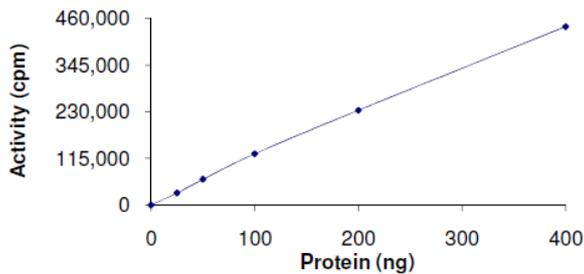
Store product at -70°C . For optimal storage, aliquot target into smaller quantities after centrifugation and store at recommended temperature. For most favorable performance, avoid repeated handling and multiple freeze/thaw cycles.

Stability:

1 year at -70°C from date of shipment.

**Specific Activity:**

The specific activity was determined to be 86 nmol /min/mg as per Activity Assay Protocol.

**Activity Assay Protocol:**

Assay activity of the kinase in a 25 μ L reaction consisting of 5 μ L of 5 X Kinase Assay Buffer, 10 μ L of 1 mg/ml the Substrate Solution, 5 μ L of diluted kinase and 5 μ L of 250 μ M ATP solution containing [γ - 32 P] ATP (0.167 μ Ci/ μ L). Start the reaction by adding the ATP solution. Incubate for 15 minutes at 30°C. Terminate the reaction by spotting 20 μ L of the reaction mixture onto phosphocellulose P81 paper. Air-dry the P81 paper and sequentially wash 4 times for approximately 10 minutes each in 1% phosphoric acid with constant gentle stirring. Count the P81 paper in a liquid scintillation counter.

Substrate Solution:

SRC synthetic peptide substrate (KVEKIGEGTYGVVYK) diluted in distilled H₂O to a final concentration of 1mg/ml.

5 X Kinase Assay Buffer:

25mM MOPS, pH 7.2, 12.5mM β -glycerol-phosphate, 20mM MgCl₂, 12.5mM MnCl₂, 5mM EGTA, 2mM EDTA. Add 0.25mM DTT to Kinase Assay Buffer prior to use.

References:

- 1.Collett, M S. et al: Protein kinase activity associated with the avian sarcoma virus src gene product. Proc Natl Acad Sci U S A. 1978 Apr;75(4):2021-4.
- 2.Jacobs, C. et al: Expression of pp60c-src protein kinase in adult and fetal human tissue: high activities in some sarcomas and mammary carcinomas. Cancer Res. 1983 Apr;43(4):1696-702.

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